Abstract

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Title of diploma thesis: Development of UHPLC method for determination of salicylic acid, methylsalicylate and ethylsalicylate in pharmaceutical formulations

New chromatografic method for determination of salicylic acid, methylsalicylate and ethylsalicylate by using ultra-high performance liquid chromatography was developed. Analysis was carried out using the Kinetex® 1.7 μm XB-C18 100 Å, 50 x 2.1 mm column. The mobile phase was composed of aqueous solution of 1% acetic acid (pH 2.6) and methanol, and the flow rate was 0.4 ml/min. Separation was achieved using gradient elutions. An UV detector at the wavelength of 240 nm was used. Propylparaben was chosen as the internal standard. The total analysis time did not exceed 7 minutes.

This method was used for the determination of releasing of salicylic acid and methylsalicylate from matrices consisting of polyester of D,L-lactic acid, glycolic acid and 8% dipentaerythritol (8D) and their dissolution media, which have been prepared at the Department of Pharmaceutical Technology at the FaF UK.

Key words: Ultra-High Performance Liquid Chromatography, salicylic acid, methylsalicylate, ethylsalicylate, drug release